

structure.

However, the present invention is characterized in that an intermediate layer of perovskite crystal structure is formed between an electrode and a ferroelectric film. That is, in the present invention, the electrode and the intermediate layer of perovskite crystal structure are separate and distinct from each other.

Therefore, Applicants submit that the present invention is clearly different from Fukushima et al.

In the present invention, the reason why the intermediate layer of perovskite crystal structure is formed between the electrode and the ferroelectric film is for use inexpensive base metal as a material of the electrode. Base metal is a material which is not self-aligned easily. Therefore, in a case that the ferroelectric film is formed directly on the electrode, crystal directions of the ferroelectric film are not aligned easily. Accordingly, in the case that the ferroelectric film is formed directly on the electrode of base material, it is difficult to form the ferroelectric film having good perovskite crystal structure. Furthermore, oxygen, etc. in the ferroelectric film tends to be diffused in the electrode of base metal. In the present invention, since the intermediate layer of perovskite crystal structure is formed between the electrode and ferroelectric film, it is possible to form the ferroelectric film having good perovskite crystal structure, even in the case that base metal is used as the material of the electrode.

Applicants submit that Fukushima et al. neither teaches nor suggests using base metal as a material of an electrode.

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Applicants submit that in Fukushima et al., in a case that base metal is used as the material of the electrode, oxygen in the ferroelectric film is diffused into the electrode, and the electrode is oxidized by oxygen, because the intermediate layer is not formed between the electrode and the ferroelectric film. Furthermore, in Fukushima et al., in a case that base metal is used as the material of the electrode, hydrogen ( $H_2O$ ) in the outside is entered into the ferroelectric film, because the intermediate layer is not formed between the electrode and the ferroelectric film. Therefore, in Fukushima et al., it is not possible to form the ferroelectric film having good perovskite crystal structure, in the case that base metal is used as the material of the electrode. Accordingly, in Fukushima et al., it is not possible to use inexpensive base metal as the material of the electrode.

Therefore, Applicant submit that the present invention is patentably distinct from Fukushima et al.

In view of the aforementioned remarks, Applicants submit that claims 1-16 are in condition for allowance, which action at an early date is earnestly requested.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for appropriate disposition of this case.

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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees that may be due with respect to this paper to Deposit Account No. 01-2340.

Respectfully submitted,

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**PATENT TRADEMARK OFFICE**

Enclosures:

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